

THE FOLLOWING PAGES SHOWS A MARKED UP VERSION OF PAGE 1 OF
THE SPECIFICATION

METHOD FOR TREATING MUSCLE SPASM WITH ~~USE OF BOTULINUM~~
TOXIN TYPE B ~~FOR TREATING VARIOUS DISORDERS AND CONDITIONS~~
AND ASSOCIATED PAIN

CROSS REFERENCE

This application is divisional of application serial number 09/490,756, filed January 24, 2000, which is a divisional of serial number 08/627,118, filed April 3, 1996, which is a continuation of serial number 08/173,996, filed December 28, 1993, now abandoned.

FIELD OF THE INVENTION

The present invention provides novel methods for treating various disorders and conditions, with Botulinum toxins. Importantly, the present invention provides methods useful in relieving pain related to muscle activity or contracture and therefore is of advantage in the treatment of, for example, muscle spasm such as Temporomandibular Joint Disease, low back pain, myofascial pain, pain related to spasticity and dystonia, as well as sports injuries, and pain related to contractures in arthritis.

BACKGROUND OF THE INVENTION

Heretofore, Botulinum toxins, in particular Botulinum toxin type A, has been used in the treatment of a number of neuromuscular disorders and conditions involving muscular spasm; for example, strabismus, blepharospasm, spasmodic torticollis (cervical dystonia), oromandibular dystonia and spasmodic dysphonia (laryngeal dystonia). The toxin binds rapidly and strongly to presynaptic cholinergic nerve terminals and inhibits the exocytosis of acetylcholine by decreasing the frequency of acetylcholine release. This results in local paralysis and hence relaxation of the muscles afflicted by spasm.

For one example of treating neuromuscular disorders, see U.S. Patent No. 5,053,005 to Borodic, which suggests treating curvature of the juvenile

**PLEASE REPLACE THE CLAIMS BY THE
FOLLOWING UNMARKED VERSION OF THE CLAIMS**

21. A method for treating a muscle spasm, the method comprising the step of administration of a therapeutically effective amount of a botulinum toxin type B to treat a muscle spasm.

22. The method of claim 21, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection.

23. The method of claim 21, wherein the administration of the botulinum toxin type B results in an alleviation of the muscle spasm within 1 day to about 7 days.

24. The method of claim 21, wherein the patient is administered at least 1,000 units of the botulinum toxin type B.

25. The method of claim 21, wherein the muscle spasm is blepharospasm.

26. The method of claim 21, wherein the muscle spasm is a symptom of strabismus.

27. A method for treating a muscle spasm in a human patient, the method comprising the step of administering to a human patient an effective amount of botulinum toxin type B to treat a muscle spasm, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection, the

the administration of the botulinum toxin type B resulting in alleviation of the muscle spasm within 1 day to about 7 days.

28. The method of claim 27, wherein the muscle spasm is blepharospasm.

29. The method of claim 27, wherein the muscle spasm is a symptom of strabismus.

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30. A method for treating a blepharospasm, the method comprising the step of administering to a human patient a therapeutically effective amount of botulinum toxin type B to treat blepharospasm, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection, and the administration of the botulinum toxin type B results in alleviation of the blepharospasm within 1 day to about 7 days.

31. A method for treating a strabismus, the method comprising the step of administering to a human patient a therapeutically effective amount of botulinum toxin type B to treat strabismus, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection, and the administration of the botulinum toxin type B results in alleviation of a muscle spasm symptom of the strabismus within 1 day to about 7 days.

MARKED UP VERSION OF THE CLAIMS

Cancel claims 1-20.

Please add the following new claims:

21. A method for treating a muscle spasm, the method comprising the step of administration of a therapeutically effective amount of a botulinum toxin type B to treat a muscle spasm.
22. The method of claim 21, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection.
23. The method of claim 21, wherein the administration of the botulinum toxin type B results in an alleviation of the muscle spasm within 1 day to about 7 days.
24. The method of claim 21, wherein the patient is administered at least 1,000 units of the botulinum toxin type B.
25. The method of claim 21, wherein the muscle spasm is blepharospasm.
26. The method of claim 21, wherein the muscle spasm is a symptom of strabismus.

27. A method for treating a muscle spasm in a human patient, the method comprising the step of administering to a human patient an effective amount of botulinum toxin type B to treat a muscle spasm, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection, the administration of the botulinum toxin type B resulting in alleviation of the muscle spasm within 1 day to about 7 days.

28. The method of claim 27, wherein the muscle spasm is blepharospasm.

29. The method of claim 27, wherein the muscle spasm is a symptom of strabismus.

30. A method for treating a blepharospasm, the method comprising the step of administering to a human patient a therapeutically effective amount of botulinum toxin type B to treat blepharospasm, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection, and the administration of the botulinum toxin type B results in alleviation of the blepharospasm within 1 day to about 7 days.

31. A method for treating a strabismus, the method comprising the step of administering to a human patient a therapeutically effective amount of botulinum toxin type B to treat strabismus, wherein the botulinum toxin type B is administered by intramuscular injection or by subcutaneous injection, and the administration of the botulinum toxin type B results in alleviation of a muscle spasm symptom of the strabismus within 1 day to about 7 days.